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| 09/780,501  | 02/12/2001  | Sadayuki Abeta       | 202863US2                       | 8133                        |
| 22850   | 7590        | 03/06/2007           |                                 |                             |
| OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C.<br>1940 DUKE STREET<br>ALEXANDRIA, VA 22314 |             |                      | EXAMINER<br>MAIS, MARK A        |                             |
|   |             |                      | ART UNIT<br>2616                | PAPER NUMBER                |
|   |             |                      | NOTIFICATION DATE<br>03/06/2007 | DELIVERY MODE<br>ELECTRONIC |

**Please find below and/or attached an Office communication concerning this application or proceeding.**

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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**Advisory Action**  
**Before the Filing of an Appeal Brief**

Application No.

09/780,501

Applicant(s)

ABETA ET AL.

Examiner

Mark A. Mais

MAM

Art Unit

2616

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 31 January 2007 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE.

1. ☒ The reply was filed after a final rejection, but prior to or on the same day as filing a Notice of Appeal. To avoid abandonment of this application, applicant must timely file one of the following replies: (1) an amendment, affidavit, or other evidence, which places the application in condition for allowance; (2) a Notice of Appeal (with appeal fee) in compliance with 37 CFR 41.31; or (3) a Request for Continued Examination (RCE) in compliance with 37 CFR 1.114. The reply must be filed within one of the following time periods:

- a) ☒ The period for reply expires 3 months from the mailing date of the final rejection.  
b) ☐ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.

Examiner Note: If box 1 is checked, check either box (a) or (b). ONLY CHECK BOX (b) WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**NOTICE OF APPEAL**

2. ☐ The Notice of Appeal was filed on \_\_\_\_\_. A brief in compliance with 37 CFR 41.37 must be filed within two months of the date of filing the Notice of Appeal (37 CFR 41.37(a)), or any extension thereof (37 CFR 41.37(e)), to avoid dismissal of the appeal. Since a Notice of Appeal has been filed, any reply must be filed within the time period set forth in 37 CFR 41.37(a).

**AMENDMENTS**

3. ☐ The proposed amendment(s) filed after a final rejection, but prior to the date of filing a brief, will not be entered because  
(a) ☐ They raise new issues that would require further consideration and/or search (see NOTE below);  
(b) ☐ They raise the issue of new matter (see NOTE below);  
(c) ☐ They are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or  
(d) ☐ They present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: \_\_\_\_\_. (See 37 CFR 1.116 and 41.33(a)).

4. ☐ The amendments are not in compliance with 37 CFR 1.121. See attached Notice of Non-Compliant Amendment (PTOL-324).  
5. ☐ Applicant's reply has overcome the following rejection(s): \_\_\_\_\_.  
6. ☐ Newly proposed or amended claim(s) \_\_\_\_\_ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).  
7. ☒ For purposes of appeal, the proposed amendment(s): a) ☐ will not be entered, or b) ☒ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.  
The status of the claim(s) is (or will be) as follows:  
Claim(s) allowed: None.  
Claim(s) objected to: None.  
Claim(s) rejected: 7, 8, 10, 11, 13, 14, 16, 17, 19, 20, 28, 29, 31, 32, 34, 35, 37, 38, 40 and 41.  
Claim(s) withdrawn from consideration: 1-6, 9, 12, 15, 18, 21-27, 30, 33, 36, 39.

**AFFIDAVIT OR OTHER EVIDENCE**

8. ☐ The affidavit or other evidence filed after a final action, but before or on the date of filing a Notice of Appeal will not be entered because applicant failed to provide a showing of good and sufficient reasons why the affidavit or other evidence is necessary and was not earlier presented. See 37 CFR 1.116(e).  
9. ☐ The affidavit or other evidence filed after the date of filing a Notice of Appeal, but prior to the date of filing a brief, will not be entered because the affidavit or other evidence failed to overcome all rejections under appeal and/or appellant fails to provide a showing of a good and sufficient reasons why it is necessary and was not earlier presented. See 37 CFR 41.33(d)(1).  
10. ☐ The affidavit or other evidence is entered. An explanation of the status of the claims after entry is below or attached.

**REQUEST FOR RECONSIDERATION/OTHER**

11. ☐ The request for reconsideration has been considered but does NOT place the application in condition for allowance because: \_\_\_\_\_.  
12. ☐ Note the attached Information Disclosure Statement(s). (PTO/SB/08) Paper No(s). \_\_\_\_\_  
13. ☒ Other: See Attached Response to Amendment.

SEEMA S. RAO  
3/1/07  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600

## DETAILED ACTION

### *Response to Amendment*

1. Claims 1-6, 9, 12, 15, 18, 21-27, 30, 33, 36, and 39 have been canceled. For purposes of Appeal, pending claims 7, 8, 10, 11, 13, 14, 16, 17, 19, 20, 28, 29, 31, 32, 34, 35, 37, 38, 40, and 41 remain rejected.
2. With respect to independent claims 7, 8, 28, and 29, Applicant's arguments filed on January 31, 2007 have been fully considered but they are not persuasive.
3. With respect to claim 7, Applicant's representative states that Sakoda et al. does not disclose all the claimed features [**Applicant's Amendment dated January 31, 2007, page 8, paragraph 3**]. Specifically, Applicant's representative summarizes Sakoda et al. and, apparently, makes the argument that Sakoda does not disclose the limitations of claim 7 such as "enabling a transmission rate to be changed by controlling the multiplex transmission intervals along a time axis" [**Applicant's Amendment dated January 31, 2007, page 9, paragraph 2 to page 10, paragraph 1**]. Applicant's representative makes the same argument for claim 28 [**Applicant's Amendment dated January 31, 2007, page 10, paragraph 2**]. The examiner respectfully disagrees.

Art Unit: 2616

4. As noted in the rejection for claims 7 and 28, Sakoda et al. discloses enabling a transmission rate of the information to be changed [e.g., see col. 6, lines 4-8; col. 6, line 66 to col. 7, line 10; **and col. 9, lines 12-28 regarding transmission rates**] by controlling multiplex transmission intervals along a time axis [e.g., see col. 10, lines 15-44 regarding time axis, **and see col. 12, lines 3-16 regarding multiplexed transmission**] for each user to which information is to be transmitted [e.g., see col. 6, line 66 to col. 7, line 10; col. 9, line 10 to col. 22, line 7; **and col. 25, line 59 to col. 28, line 13**].

5. Controlling the multiplex transmission intervals is defined as spreading the symbols into sub-carriers having different frequencies [**Applicant's claims 7 and 28**]. Applicant's representative specifically characterizes the communication in Sakoda et al. as being conducted in set channels using a multi-carrier signal having transmission symbols distributed among a plurality of sub-carriers (which must *necessarily* have different frequencies) [**Applicant's Amendment dated January 31, 2007, page 9, paragraph 3**]. Therefore, the claim limitations recited in Applicant's claims 7 and 28 are present in Sakoda et al.

6. Furthermore, in characterizing Sakoda et al., Applicant's representative seems to be making the argument that Sakoda et al. performs null symbol insertion to make the symbol rate equal to the maximum transmission rate [and, apparently, that Applicant's invention does not] [**Applicant's Amendment dated January 31, 2007, page 9, paragraphs 3-4**]. In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., not performing null symbol insertion)

are not recited in the rejected claims. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

7. With respect to claim 8, Applicant's representative states that Sakoda et al. does not disclose all the claimed features [**Applicant's Amendment dated January 31, 2007, page 8, paragraph 3**]. Specifically, Applicant's representative summarizes Sakoda et al. and, apparently, makes the argument that Sakoda et al. does not disclose the limitations of claim 8 such as "enabling a transmission rate to be changed by controlling the number of modulation levels used when the information symbols to be spread are obtained through data modulation" [**Applicant's Amendment dated January 31, 2007, page 10, paragraph 3**]. Applicant's representative makes the same argument for claim 29 [**Applicant's Amendment dated January 31, 2007, page 10, paragraph 4**]. The examiner respectfully disagrees.

8. As noted in the rejection for claims 8 and 29, Sakoda et al. discloses enabling a transmission rate of the information to be changed [e.g., see col. 6, lines 4-8; col. 6, line 66 to col. 7, line 10; and col. 9, lines 12-28 regarding transmission rates] by controlling the number of modulation levels [e.g., see col. 12, lines 17-36 regarding differential modulation; and see col. 17, line 64 to col. 19, line 31 regarding controlling differential modulation levels] used when the information symbols to be spread are obtained through data manipulation [e.g., see col. 6, line 66 to col. 7, line 10; col. 9, line 10 to col. 22, line 7; and col. 25, line 59 to col. 28, line 13].

Art Unit: 2616

9. Applicant's representative further argues that Sakoda et al. merely describes different modulation schemes [**Applicant's Amendment dated January 31, 2007, page 10, paragraph 3**] and, apparently, that Sakoda et al. does not disclose that the number of modulation levels can be increased by increasing the transmission rate [**Applicant's Amendment dated January 31, 2007, page 10, paragraph 3**]. First, in response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., increasing the modulation level to accommodate a higher transmission rate) are not recited in the rejected claims. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). Second, Sakoda et al. discloses differential processing [**col. 12, lines 17-36; e.g., 16-QAM**] such that the transmission rate can be changed by the use of the different modulation schemes [**col. 17, line 64 to col. 19, line 31; e.g., modulating from 1 to  $\frac{1}{4}$  of the modulation time of one symbol—which is the same as modulating from 16-QAM to 64-QAM (as disclosed in Applicant's Amendment dated January 31, 2007, page 10, paragraph 4)**]. There is *necessarily* a relationship between the modulation levels and the transmission rate such that one may change with the other.


### ***Conclusion***

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mark A. Mais whose telephone number is 572-272-3138. The examiner can normally be reached on M-Th 5am-4pm.

Art Unit: 2616

11. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Seema Rao can be reached on 571-272-3174. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

12. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
February 18, 2007